The volumes and the corresponding weight of a cubic metre of the gas are at mean temperatures :—
In column (ab} SOO°=3-936 times volume, corresponding to 0-3 kilogramme per cubic metre.
,, „ (be) 550°=3'01 times volume, corresponding to 0-388 kilogramme per cubic metre.
,, „ (cd) 900°=4-3 times volume, corresponding to 0-273 kilogramme per cubic metre.
The weights of the individual gas columns are :—
Kg. Kg.
In (a^) Air#+9xl-2937==p+ll-64 kilogrammes, operating in the sketch from right to left, attaining therefore a positive sign . . -\~p~\~ll'64:
In (ab} Gras 9x0-3=2-7 kilogrammes, working in the sketch from left to right, as against the before-mentioned pressure, and therefore carries the negative sign .
— 2 • 7
In (be) Gas 9 x 0-388=3-49 kilogrammes, working in the sketch from right to left, therefore . . . + 3-49
In (cd) Gas 8-4x0-273 =2-28
Air 0-6xl-2937=0*78+p
.Total weight 3-06 +p works in the sketch from left to right, therefore .
—3*06—p
Total of the weights . +p+15 • 13 — 5 * 7 6 —p
Or 15*13—5-76=9-37 kilogrammes1 for the square metre, or 9'37 millimetres height of water, buoyancy in the gas port.
0-6'

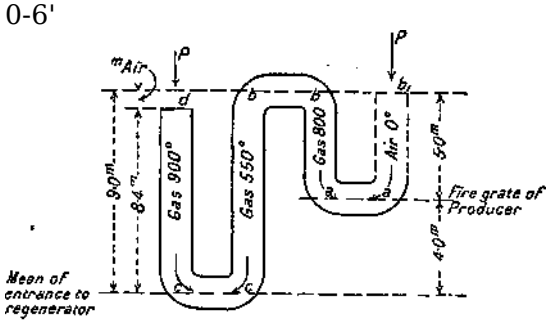

FIG. 4.
If one places the producers higher, as in many new plants for example, 4 metres higher—whilst the other remaining